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CENTRAL INTELLIGENCE AGENCY
INFORMATION REPORT

REPORT

CD NO.

25X1

COUNTRY East Germany

DATE DISTR. 9 June 1955

SUBJECT East German Electric Power Program for 1956

NO. OF PAGES 5

PLACE ACQUIRED

NO. OF ENCLS. (LISTED BELOW) 25X1

DATE OF INFO.

SUPPLEMENT TO REPORT 25X1

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THIS IS UNEVALUATED INFORMATION

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1. The development prospects for electrical power in 1956 are not yet in final form. Preparatory work to date, taking financial possibilities into account, has resulted in a tentative program for increasing installed capacity which could be designated as the absolute minimum. This program calls for an increase of 2,725.31 megawatts in electrical capacity.

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- 2. Especially important in this draft plan are:
 - construction of the Hochdruckkraftwerk Trattendorf with 300 MW
 - construction of the Hochdruckkraftwerk Ferzdorf with 450 MW
 - construction of a power plant in Koksombinat "Schwarze Pumpe" with 274 MW
 - reconstruction of Pumpspeicherwerk Niederwartha as a peak-load power station with 86.63 MW
 - building of a large Pumpspeicherwerk Amalienhoehe, also as a peak-load power station with 200 MW

3. Particularly significant and important for the expansion of the power network is the anticipated building of a high-voltage closed circuit (Ringleitung) throughout all East Germany, principally carrying 120-220 kV voltage.

4. Also significant are the projected measures to improve the reactive current economy (Blindstromhaushalt), although the anticipated production of reactive current condensers is inadequate and must be considerably expanded. By doing so, it would be possible to reduce losses in the network considerably and increase the power

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The ~~lowest~~ estimate for the planned capacity increase for the Main Administration is ~~Electrical Power~~

The total cost of the capacity increase of 1,905.18 Megawatts planned by the Main Administration for Electrical Power amounts to 1,486,100,000 DME of which 1,403,200,000 DME are for equipment and 82,900,000 DME for construction.

2. Networks

In the 220 kV Network during the course of the Second Five Year Plan, a total of 1,032 kilometers of long-distance lines, with a value of 58,950,000 DME, will be installed. At the same time, eleven 220/110 kV transformer sub-stations will be built and completed at the cost of about 110,000,000 DME. The following individual projects are concerned:

Zweenitz - Czechoslovakian border	1956
Berzdorf - Trattendorf	1956/1958
Dresden - Berzdorf	1957
Zweenitz - Dresden	1958
Berlin Ost - Berlin West	1959

The 110 kV network will only be expanded sufficiently so that it can carry the capacity from the 220 kV network to the appropriate transformer sub-stations. In 1956/1957, the joint enterprise with the People's Republic of Poland via Pasewalk will go into operation. To carry the capacity of the 110 kV network to the Mittelspannungsnetz, new 110 kV transformer sub-stations will have to be built and the capacity of the existing ones expanded.

All in all, 436 kilometers of duplex conductor wire (Doppelleitung), 650 kilometers 2-electrical circuits (on the existing duplex conductor wire) and 300.5 kilometers uninsulated wire (of Mittelspannung on 110 kV) are to be installed. The total cost amounts to about 137,000,000 DME.

3. Measures to Improve the Reactive Current Economy

Installation of rotary phase changers (Phasenschieber):

1955 Niederwartha (2 generators going into operation as phase changers, final completion as pump load station 1958)	about 43 MVar
1956 Schwabenberg (40 MVA Generator)	about 20 MVar
1958 UW Berlin-Ost	about 118 MVar

Compensation through static condensers:

Condenser production in 1954 amounted to	120 MVar
The 1955 Plan anticipated	plus about 20 MVar
	through private firms
	140 MVar

Because of material and marketing difficulties, the production capacity of firms manufacturing condensers is not completely utilized. Capacity amounts to about 174 MVar per year.

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its in total capacity is distributed
as follows:

Ministry for Heavy Industry -		2,658.28 MW
Main Administration for Electrical Power	1,905.18 MW	
Production Area - Coal	369.3 MW	
Production Area - Chemicals	383.8 MW	
Ministry for Light Industry		23.43 MW
Ministry for Machine Construction		33.4 MW
Ministry for Transportation		8.2 MW
State Secretariat for Higher Education		2.0 MW
		<hr/>
		2,725.31 MW

The most important projects are:

KW Elbe	Completed 1956 - 3 boilers 160 t/h, 84 at, 3 machines 32 MW	96	MW
KW Trattendorf I	Construction of 1st East German high-pressure plant (Hochedruckwerk), 1956 - 1960 6 boilers 160 t/h, 132 at, 4 2-Wellen-Saetze - 25 MW Vorschalt, 50 MW Nachschalt	300	MW
KW Hirschfelde	Installation of series-connection equipment, capacity increase 1956 - 1958 4 boilers 240 t/h, 132 at, 3 series-connected machines 25 MW 1 Nachschaltmaschine 50 MW (installed 1954/1955)	225	MW
KW Zschornowitz	Installation of series-connection equipment, capacity increase 1957 4 boilers 160 t/h, 132 at, 2 series-connected machines 25 MW	50	MW
KW Berzdorf	High-pressure plant, 1st construction, 1957-1960 6 boilers 160 t/h, 132 at 4 2-Wellen-Saetze - 25 MW Vorschalt, 50 MW Nachschalt (Further construction with 150 MW in 1959 will be a high-pressure research installation, using Soviet design with machines 180 at, 550°)	150	MW
WKW Niederwartha	Reconstruction of Pumpspeicherwerk 1956-1957 4 Francis-turbines 1 pump Q - 12 cm/sec, H - 138 m 2 generators 28 MW (installed 1955)	86.63	MW
WKW Amalienhoehe	Largest Pumpspeicherwerk in East Germany with capacity in 1959 of	200	MW
Kombinat Bechlen	Installation of series-connection equipment 1956 - 1958 8 boilers 160 t/h, 132 at 4 series-connected machines 25 MW	100	MW
Kombinat Espenhain	1956 - 1 boiler 220 t/h 84 at, 1 machine 50 MW	50	MW
Schwarze Pumpe	1958 - 1960, in connection with Kohlekombinat 8 boilers 240 t/h, 132 at 5 waste-heat boilers 25 t/h, 16 at 5 series-connected machines 32 MW 3 back-pressure engines 32 MW 2 Kond-Maschinen 25 MW 1 Nachschaltmaschine 32 MW	274	MW
Heating plants	Most important of planned installed capacity Pirna, Leipzig Sud Ost, Karl-Marx-Stadt Nord and Sud, Magdeburg, Wittenberg. Back-pressure engines 12, 8, and 8 MW Kond. Maschine 25 MW	290	MW

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Power Program for 1956 and 1957

<u>Ministry</u>	<u>Million</u>	<u>Million DME</u>
<u>Ministry for Heavy Industry:</u>		
1. Main Administration Electrical Power	371.54	164.0
2. Main Administration Lignite	49.0	18.4
3. Production Area Chemicals	105.2	35.5
	525.74	215.9
Ministry for Light Industry	15.43	0.6
Ministry for Transportation	3.2	0.3
Ministry for Food Industries	1.0	0.6
State Secretariat for Higher Education	2.0	1.1
Ministry for Machine Construction	9.6	1.5
	556.97	220.0
<u>Main Administration for Electrical Power</u>		
1. Trattendorf I/II	50.0	10.0
2. Trattendorf I	150.0	55.0
3. Elbe	56.0	10.0
4. Hirschfelde	25.0	22.0
5. Zschernowitz	-	12.0
6. Pirna	-	5.0
7. Dimitroff Leipzig	-	5.0
8. HKW Leipzig-Suedost	25.0	12.0
9. Zittau	2.0	2.0
10. Niederwartha	22.13	20.5
11. Water power installations	1.41	1.0
12. Transfer installations, Trattendorf - Berlin	-	5.5
13. Reserve generators	-	4.0
	371.54	164.0
<u>Main Administration Lignite</u>		
1. BKW Schnee	20.0	7.0
2. BKW Heide	0.3	0.7
3. BKW Deuben	13.0	2.5
4. BKW Amsdorf	3.2	0.7
5. BKW Regis	12.5	7.4
	49.0	18.4
	0	0.7
	0	1.0
	2	1.0
	0	2.2
	0	1.3
	0	10.0
7. Kaliwerk Panna	2.0	3.0
8. Kaliwerk Bleicherode	8.0	4.0
9. Kaliwerk Merkers	17.0	9.5
10. Kaliwerk Dorndorf	2.0	0.8
	105.2	33.5

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<u>Ministry for Light Industry</u>	<u>Investment</u>	<u>Million</u>
1. Spinnerei Ebersbach	2.0	0.4 *
2. Textilwerk Hartha	1.6	0.2 *
3. Baumwollspinnerei Falkenau	3.2	0.5 *
4. Textilveredelungswerk Glauchau	0.8	0.2 *
5. Zellstoffwerk Gnozditz	3.2	0.5 *
6. Papierfabrik Golzern	3.2	0.8 *
7. Wasserkraftwerk Kriebstein	0.7	0.3
8. Wasserkraftwerk Kriebitzsch	0.73	0.3
	15.43	4.4
<u>Ministry for Transportation</u>		
1. Bahnkraftwerk Muldenstein	3.2	0.3
<u>Ministry for Food Industries</u>		
1. Schlachthof Dresden	1.0	0.6
<u>State Secretariat for Higher Education</u>		
1. Technische Hochschule Dresden	2.0	1.2
<u>Ministry for Machine Construction</u>		
1. Kranbau Eberswalde	1.2	0.2
2. Bleichert, Leipzig	2.0	0.2
3. Trarose Dresden	3.2	0.9
4. Zeiss, Jena	3.2	0.2
	9.6	1.5

* These figures are already included in the 1955 Investment Plan.

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[Redacted] minimum. This program calls for an increase of
2,725.31 megawatts in installed capacity.

- 2. [Redacted] in this draft plan are:
 - operation of the Hochdruckkraftwerk Trattendorf with 300 MW
 - operation of the Hochdruckkraftwerk Herzdorf with 450 MW
 - reconstruction of a power plant in Koks kombinat "Schwarze Pumpe" with 274 MW 25X1
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[Redacted] important and important for the expansion of the power network is the anticipated building of a high-voltage closed circuit (Ingleitung) throughout all East Germany principally carrying 220 KV voltage.

3. Also significant are the projected measures to improve the reactive current economy (Blindstromhaushalt), although the anticipated production of reactive current condensers is inadequate and must be considerably expanded. By doing so, it would be possible to reduce losses in the network considerably and increase the power factor (Leistungsfaktor) of the electrical energy available. It should also lead to a better utilization of the present 800-MVA quantity of reactive current carried.

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2. Networks

In the 220 kV network during the course of the Second Five Year Plan, a total of 1,032 kilometers of long-distance lines, with a value of 58,950,000 DME, will be installed. At the same time, eleven 220/110 kV transformer sub-stations will be built and completed at the cost of about 110,000,000 DME. The following individual projects are concerned:

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Berzdorf - Trattendorf	1956/1958
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The 110 kV network will only be expanded sufficiently so that it can carry the capacity from the 220 kV network to the appropriate transformer sub-stations. In 1956/1957, the joint enterprise with the People's Republic of Poland via Pasewalk will go into operation. To carry the capacity of the 110 kV network to the Mittelspannungsnetz, new 110 kV transformer sub-stations will have to be built and the capacity of the existing ones expanded.

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1958 UW Berlin-Ost	about 100 MVar

about 173 MVar

Compensation through static condensers:

Condenser production in 1954 amounted to	about 113 MVar
The 1955 Plan anticipates	120 MVar
plus about	20 MVar through private firms
	140 MVar

Because of material and marketing difficulties, the production capacity of firms manufacturing condensers is not completely utilized. Capacity amounts to about 174 MVar per year.

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Table I

Rough Survey of the Long Range Plan (Perspektivplan)
for Electrical Power, 1956 - 1960

1. Power Plants

The anticipated increase of about 2,725 Megawatts in total capacity is distributed among the individual ministries as follows:

Ministry for Heavy Industry -		2,658.28 Mw
Main Administration for Electrical Power	1,905.18 MW	
Production Area - Coal	369.3 MW	
Production Area - Chemicals	383.8 MW	
Ministry for Light Industry		23.43 Mw
Ministry for Machine Construction		33.4 Mw
Ministry for Transportation		8.2 Mw
State Secretariat for Higher Education		2.0 Mw
		<hr/>
		2,725.31 Mw

The most important projects are:

KW Elbe	Completed 1956 -	96	Mw
	3 boilers 160 t/h, 84 atü, 3 machines 32 MW		
KW Trattendorf I	Construction of 1st East German high-pressure plant (Hochdruckwerk), 1956 - 1960	300	Mw
	6 boilers 160 t/h, 132 atü,		
	4 2-Wellen-Saetze - 25 Mw Vorschalt, 50 Mw Nachschalt		
KW Hirschfelde	Installation of series-connection equipment, capacity increase 1956 - 1958	125	Mw
	4 boilers 240 t/h, 132 atü,		
	3 series-connected machines 25 MW		
	1 Nachschaltmaschine 50 MW (installed 1954/1955)		
KW Zschornowitz	Installation of series-connection equipment, capacity increase 1957	50	Mw
	4 boilers 160 t/h, 132 atü		
	2 series-connected machines 25 MW		
KW Berzdorf	High-pressure plant, 1st construction, 1957-1960	450	Mw
	6 boilers 160 t/h, 132 atü		
	4 2-Wellen-Saetze - 25 Mw Vorschalt, 50 Mw Nachschalt		
	(Further construction with 150 MW in 1959 will be a high-pressure research installation, using Soviet design with machines 180 atü, 550)		
MKW Niederwartha	Reconstruction of Pumpspeicherwerk 1956-1957	86.63	Mw
	4 Francis-turbines		
	4 pumps Q - 12 cbm/sek, H - 138 m		
	2 generators 28 Mw (installed 1955)		
MKW Amalienhöhe	Largest Pumpspeicherwerk in East Germany with capacity in 1959 of	200	Mw
Kombinat Boehlen	Installation of series-connection equipment 1956 - 1958	100	Mw
	8 boilers 160 t/h, 132 atü		
	4 series-connected machines 25 MW		
Kombinat Espenhain	1956 - 1 boiler 220 t/h 84 atü, 1 machine 50 Mw	50	Mw
Schwarze Pumpe	1958 - 1960, in connection with Kohlekombinat	274	Mw
	8 boilers 240 t/h, 132 atü		
	5 waste-heat boilers 25 t/h, 16 atü		
	5 series-connected machines 32 Mw		
	3 back-pressure engines 32 Mw		
	2 Kondensatoren 25 Mw		
	1 Nachschaltmaschine 32 Mw		
Heating plants	Most important of planned installed capacity at:	290	Mw
	Pirna, Leipzig Süd-Ost, Karl-Marx-Stadt Nord and Süd, Magdeburg, Wittenburg.		
	Boiler pressures: 84 and 42 atü,		
	Back-pressure engines: 12.5 and 8 Mw		
	For Karl-Marx-Stadt, 1 Entn. Kond. Maschine 25 Mw		

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Table II

Power Program for 1956 and 1957

<u>Ministries</u>	<u>Megawatts</u>	<u>Million DNE</u>
<u>Ministry for Heavy Industry:</u>		
1. Main Administration Electric Power	371.54	164.0
2. Main Administration Lignite	49.0	18.4
3. Production Area Chemicals	105.2	35.5
	525.74	215.9
Ministry for Light Industry	15.43	0.6
Ministry for Transportation	3.2	0.3
Ministry for Food Industries	1.0	0.6
State Secretariat for Higher Education	2.0	1.1
Ministry for Machine Construction	9.6	1.5
	556.97	220.0
<u>Main Administration for Electrical Power</u>		
1. Trattendorf III	50.0	10.0
2. Trattendorf I	150.0	55.0
3. Elbe	56.0	10.0
4. Hirschfelde	25.0	22.0
5. Zschornowitz	-	12.0
6. Pirna	-	5.0
7. Dimitroff Leipzig	-	5.0
8. HKW Leipzig-Suedost	25.0	12.0
9. Zittau	2.0	2.0
10. Niederwartha	22.13	20.5
11. Water power installations	1.41	1.0
12. Transfer installations, Trattendorf - Berlin	-	5.5
13. Reserve generators	-	4.0
	371.54	164.0
<u>Main Administration Lignite</u>		
1. BKW Sonne	20.0	7.0
2. BKW Heide	0.3	0.7
3. BKW Deuben	13.0	2.5
4. BKW Amsdorf	3.2	0.7
5. BKW Regis	12.5	5.8
	49.0	18.4
<u>Production Area Chemicals</u>		
1. Fahlberg-list	2.0	0.7
2. Sprengstoffwerk Scheensbeck	1.0	1.0
3. Elektrochemisches-Werk Ammendorf	3.2	1.0
4. Launa-Werke	15.0	2.2
5. Hydrierwerk Rodleben	5.0	1.3
6. Kombinat Aspenhain	50.0	10.0
7. Gummiwerk Alsea	2.0	3.0
8. Kaliwerk Bleicherode	8.0	4.0
9. Kaliwerk Werkers	17.0	9.5
10. Kaliwerk Dorndorf	2.0	0.8
	105.2	33.5

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	<u>Megawatts</u>	<u>Million DME</u>
<u>Ministry for Light Industry</u>		
1. Spinnerei Ebersbach	2.0	0.4 *
2. Textilwerk Hartha	1.6	0.2 *
3. Baumwollspinnerei Falkenberg	3.2	0.5 *
4. Textilveredelungswerk Glauchau	0.8	0.2 *
5. Zellstoff Groeditz	3.2	0.5 *
6. Papierfabrik Gollern	3.2	0.3 *
7. Wasserkraftwerk Kriebitzsch	0.7	0.3
8. Wasserkraftwerk Kriebitzsch	0.73	0.3
	15.43	4.4

Ministry for Transportation

1. Bahnkraftwerk Muldenstein	3.2	0.3
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Ministry for Food Industries

1. Schlachthof Dresden	1.0	0.6
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State Secretariat for Higher Education

1. Technische Hochschule Dresden	2.0	1.1
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Ministry for Machine Construction

1. Kranbau Eberswalde	1.2	0.2
2. Bleichert, Leipzig	2.0	0.2
3. Harroco Dresden	3.2	0.9
4. Zeiss, Jena	3.2	0.2
	9.6	1.5

* These figures are already included in the 1955 investment plan.

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